

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE WORK PACKAGE REVISION REQUEST

Page 1 of 2

STANDARD WORK PACKAGE SERIAL NUMBER: SWP-RFCSS-00002-00
WORK CONTROL NO. _____ REVISION NO. 1.0

TITLE: RECONNAISSANCE LEVEL CHARACTERIZATION

DESCRIPTION AND REASON FOR REQUESTED CHANGE(S): ADD STEPS TO INCLUDE "COUPON" SAMPLING FOR ISOTOPIC ANALYSIS; MODIFY JHIT/JHA FOR "COUPON" SAMPLING

Originator: Steve Luker

Name

Signature

Date

REQUEST DISPOSITION:

☒ Request Approved

☐ Request Disapproved

Reason for Disapproval:

Planner:

Paul A. Wojtaszek

Name

Signature

Date

CONCURRENCE:

Based on my personal review, I agree that the work described in this package meets technical requirements under my cognizance and can be performed safely.

Responsible:

Marla Broussard

Name

Signature

Date

Organization

H&S:

Brian Maria

Name

Signature

Date

Engineering:

N/A

Name

Signature

Date

Rad Safety:

Rick Roberts

Name

Signature

Date

Crit Safety:

N/A

Name

Signature

Date

Nuc Safety:

N/A

Name

Signature

Date

Environmental:

Marcia Murdock

Name

Signature

Date

Fire Protection:

N/A

Name

Signature

Date

Quality:

Mark Brooks

Name

Signature

Date

ORC/PRC:

N/A

Initials

ORC/PRC Meeting No.

Date

(Review Only)

NOV 2000
RECEIVED
RECORDS CENTER

ADMIN RECCRD

IA-A-000584

1/20

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
WORK PACKAGE REVISION REQUEST

Page 2 of 2

WORK CONTROL NO. _____

REVISION NO. _____

APPROVAL:

If SWP used for TS&R work, signature indicates that specific limitations and boundaries on repair activities have been clearly identified

Responsible: _____
Manager (Rep) Name Signature Date

SWP USE AUTHORIZATION:

Use of this Standard Work Package (SWP) is authorized for the work specified by the Work Control Form contained herein. Work must be started within 90 calendar days.

Responsible: M.C. Broussard , M. Broussard , 9/7/00
Manager (Rep) Name Signature Date

CLOSURE CONCURRENCE:

Based upon my personal review of this work package and inspection of the work site, all of the work and retest specified in this package has been satisfactorily completed.

Job Supervisor: _____
Name Signature Date

Engineering: N/A _____
Name Signature Date

Quality RS LUKER , [Signature] , 9/7/00
Name Signature Date

CLOSURE APPROVAL:

Responsible: M.C. Broussard , M. Broussard , 9/7/00
Manager (Rep) Name Signature Date

Section 2

Table of Contents / List of Effective Pages

Section	Title	Pages	Rev
1	Work Package Cover Sheet	1	0
2	Table of Contents / List of Effective Pages	2	0
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4	Work Package Change Log	4	0
5	List of Required Drawings and References	5	0
6	Bill of Materials	6	0
7	List of Special Equipment, Materials, and PPE	7	0
8	Initial Conditions and Prerequisites	8	0
9	Specific Task Instructions	11	0
10	Post Maintenance Test (PMT) Requirements	19	0

Appendices

Appendix

- Appendix - 1 Job Hazard Analysis (JHA), Activity Screen Form (ASF), Health & Safety Plan, MSDS's.
- Appendix - 2 Status Log
- Appendix - 3 Miscellaneous and Field Generated Paperwork.
- Appendix - 4 Pre-evolutionary Briefing Forms and Pre-ev Record Keeping.
- Appendix - 5 Work Package Re-Start Pre-Requisites
- Appendix - 6 Respiratory Protection On-The -Job Verification Work Sheet.
- Appendix - 7 Post Job Review Form and Instructions.
- Appendix - 8 Characterization Package.
- Appendix - 9 Additional Concurrence Signatures.

Section 3

WCF

Pages 3a & 3b

Section 4 Work Package Change Log

REVISION NO.	SECTION NO./ APPENDIX NO.	DESCRIPTION																																																												
4.19.200	GENERAL	LATEST LIST of GROUPS B + C TRAINERS/RODS to be CHARACTERIZED FOR FREE RELEASE VIA the RLC PROCESS --																																																												
		<div><div>GROUP B</div><div>T881 A T881 B T883 A T883 B T439 A T439 BD (FL) P575</div></div> <div><div>GROUP C</div><div>B331A B987 T331A T771D T331 T750E T903A</div></div>																																																												
		FL																																																												
		THIS STANDARD WORK PACKAGE HAS THE FOLLOWING ASSOCIATED WORK CONTROL #'s																																																												
		<div><div>GROUP B</div><div>{ T0102834 T0102836 T0103087</div></div> <div><div>GROUP C</div><div>{ T0102832 T0102837 T0102838</div></div>																																																												
		FL																																																												
6/1/00	General	Due to elevated Rad levels on Roof of B331A, 2 (two) coupon samples will be taken on 6/1/00. See attached Punch list dated 5/31/00 for specific information regarding this task.																																																												
		AR Cullen - 518395																																																												
6/27/00		Asbestos Sampling / LIGHT BALANCE "SIGN-OFF" SHEETS WITHIN the CHARACTERIZATION PACKAGE WILL NOT BE AUTHENTICATED by INDIVIDUAL BALANCE (WORK) BUT BY GROUPING & the SPECIFIC LIST PROVIDED BELOW:																																																												
		<table><tr><th colspan="2">Asbestos Inspection</th><th colspan="2">Asbestos Samples</th><th colspan="2">PCB/BALANCE INSPEC.</th></tr><tr><th>GRP B</th><th>GRP C</th><th>GRP B</th><th>GRP C</th><th>GRP B</th><th>GRP C</th></tr><tr><td>T881A</td><td>B331A</td><td>T883A</td><td>T903A</td><td></td><td></td></tr><tr><td>T881B</td><td>B987</td><td></td><td></td><td></td><td></td></tr><tr><td>T883A</td><td>T331A</td><td>T883B</td><td>T750E</td><td></td><td></td></tr><tr><td>T883B</td><td>T771D</td><td></td><td></td><td></td><td></td></tr><tr><td>FL T439A</td><td>T331</td><td></td><td>T331A</td><td></td><td></td></tr><tr><td>T439D</td><td>T750E</td><td></td><td></td><td></td><td></td></tr><tr><td>P575</td><td>T903A</td><td></td><td></td><td></td><td></td></tr><tr><td>FL T903A</td><td></td><td></td><td></td><td></td><td></td></tr></table>	Asbestos Inspection		Asbestos Samples		PCB/BALANCE INSPEC.		GRP B	GRP C	GRP B	GRP C	GRP B	GRP C	T881A	B331A	T883A	T903A			T881B	B987					T883A	T331A	T883B	T750E			T883B	T771D					FL T439A	T331		T331A			T439D	T750E					P575	T903A					FL T903A					
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P575	T903A																																																													
FL T903A																																																														

SIGNED: Mark Campbell Mark Campbell

① OMITTED FROM REPORT; TRAINED OMITTED FROM GROUP

5/31/00

Punch List for Sampling of 331A Rooftop

IWCP – SWP-RFCSS-00002-00 REV. 1 (4/8/1/2000)
pen and ink via Al Helmick/MCB
address change log section in IWCP
obtain & maintain logbook (see Lukers box(s))

POD Randy

Equipment - Ladder/Drill/Bit/Sample containers (3 or 4) 250 ML Wide Mouth Glass,
custody seals, RAM Transfer tags etc.

Conduct and document tail-gate safety meeting
address spotter for ladder, wind, ladder footing and angle etc.
do not attempt to go on the roof, Collect samples from ladder.

Identify locations on roof to sample, E Mckamey

Tom Szydlowski setting up new Rin and events for this because we could not tack onto
the last project for unclear reasons. Luker needs to talk w/Tom S. on this. I asked for 3
events/samples (expect only 2 are required)

Joe Bianconi and Luker need to communicate on Oasis method (MDA, count times etc)
and when samples will be getting to 771.

Maintain Chain of Custody from samplers to Bianconi X7262. Tom S., X8165 will
provide the COC Form to Luker.

Hard Hats, Steel toes, Safety Glasses w/sides, DOE's

Good Luck and page me after noon if you need.

Also, verify charge number NG2200C1, valid?

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Section 5

List of Required Drawings and References

Performance References

<u>Ref/Draw No</u>	<u>Description</u>	<u>Issue Date</u>
PRO-563-ACPR	Asbestos Characterization Procedure	09/01/99
PRO-476-RSP-16.02	Radiological Surveys of Surfaces and Structures	09/30/99
33-PRO-165-RSP-16.03	Radiological Sampling of Building Media	09/30/99

Developmental References

<u>Ref/Draw No</u>	<u>Description</u>	<u>Issue Date</u>
29CFR 1926.32(f)	Occupational Safety and Health Standards	02-01-99
29CFR 1926.1101(k)(5)ii	Occupational Safety and Health Standards	02-01-99
29CFR 1926.1101(g)	Occupational Safety and Health Standards	02-01-99
3-PRO-165-RSP-07.02	Contamination Monitoring Requirements	02-17-98
MAN-077-DDCP	Decontamination & Decommissioning Characterization Protocol	11-20-98
MAN-066-COOP	Site Conduct of Operations Manual	09-15-98
3-PRO-141-RSP-09.01	Unrestricted Release of Property, Material, Equipment, and Waste	03-31-99
RM-06.02	Records Identification, Generation, and Transmittal	05-28-97
2-S47-ER-ADM-05.14	Use of Field Log Books and Forms	06-05-95
RMRS -QAPD-001	RMRS Quality Assurance Program Description	09-13-99
4-SOI-ENV-OPSF0.03	Field Decontamination Operations	02-16-95
RMRS/OPS-PRO.112	Handling of Decontamination Water and Wash Water	12-30-98
1-PRO-079-WGI-001	Waste Characterization, Generation, and Packaging	11-03-97
1-N07-HSP-7.03	Breathing Air	11-02-98
1-F13-HSP-7.05	Hearing Conservation	09-25-97
MAN-071-IWCP	Integrated Work Control Manual, Rev 1, Chg 1	11-30-97
MAN-072-OS&IH PM	Chapter 19: Asbestos Management Program	9-30-98
MAN-072-OS&IH PM	Chapter 28: Chronic Beryllium Disease Prevention Program	5-24-99
MAN-072-OS&IH PM	Chapter 29: Eye and Face Protection Program	11-30-98
MAN-072-OS&IH PM	Chapter 30: Foot Protection	11-30-98
MAN-072-OS&IH PM	Chapter 31: Respiratory Protection Selection	11-30-98
MAN-072-OS&IH PM	Chapter 33: Hearing Conservation Program	03-15-99
MAN-072-OS&IH PM	Chapter 34: Head Protection	11-30-98
MAN-072-OS&IH PM	Chapter 39: Ladder Safety	11-30-98
MAN-072-OS&IH PM	Chapter 40: Scaffolds	11-30-98
MAN-072-OS&IH PM	Chapter 41: Work Platforms	03-02-99
MAN-072-OS&IH PM	Chapter 42: Fall Protection and Equipment	11-30-98
RF/RMRS-98-284	Generic Health & Safety Plan for Characterization Sampling	01-99
RF/RMRS-DC-06.01	Document Control Program	05-28-97

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SECTION 6

BILL OF MATERIALS (BOM)

NOTE

MATERIAL ACQUISITION IS NOT SCHEDULED / REQUIRED FOR THIS PROCEDURE.

Section 7

Special Tools, Materials and Personnel Protective Equipment

7.0 SPECIAL TOOLS AND MATERIALS

7.1 TOOL / MATERIAL DESCRIPTION

NOTE

THE NE ELECTRA INSTRUMENT WILL BE USED TO PERFORM ALPHA SCANS. ADDITIONAL SURVEY EQUIPMENT APPROVED FOR USE AT RFETS MAY BE USED AS AUTHORIZED BY RADIOLOGICAL ENGINEERING. REFERENCE THE CHARACTERIZATION PLAN (CONTAINED IN APPENDIX 6 OF THIS WORK PACKAGE) FOR INSTRUMENTATION USAGE.

- (1) Ladders
- (2) Sharpie (marking pens)
- (3) Whatman 41, 4.7 cm filter papers
- (4) NE Electra
- (5) Cordless electric drill with coring bit
- (6) Chisel
- (7) Sheet metal snips
- (8) Sample jars

NOTE

THE FOLLOWING PPE IS DEFINED AS THE MINIMUM USAGE FOR TRAILER SURVEYS. ADDITIONAL PPE MAY BE ADDED AND DOCUMENTED AT ANY TIME AS NECESSARY. NOTE: SUBSTITUTIONS SHALL NOT BE MADE WITHOUT INDUSTRIAL HYGIENE CONCURRENCE.

7.2 PPE

7.2.1 SUBCONTRACTOR

Initiate site safety compliance by implementing personnel usage of the following PPE as appropriate:

- (1) Safety glasses with side shield (ANSI Z87.1 approved).
- (2) Hard Hat (ANSI Z98.1). Bump Cap (RMRS OPS/DIR-019) is authorized if work area is not posted as *specifically* requiring hard hat.
- (3) Approved above ankle leather boots, with ANSI Z41.1 approved safety toecaps.
- (4) Leather Gloves

Section 8

Initial Conditions and Prerequisites

PURPOSE: This standard work package provides instructions for radiological sampling and surveys, asbestos inspection and sampling, and inspection of fluorescent light ballasts for purposes of reconnaissance-level characterization or MARSSIM release.

SCOPE: Conduct radiological surveys, asbestos inspection and sampling, and inspection of fluorescent light ballasts

8.1 PRECAUTIONS AND LIMITATIONS

- 8.1.1 Advise Workers that if any discrepancies, difficulties or hazards are encountered that cannot be safely resolved within the scope of work, STOP WORK, and immediately inform supervisory personnel. Note: Stop work is in accordance to RMRS Directive 1. Restart will be authorized by the RMRS Vice President or designee.
- 8.1.2 Develop / update A Job Hazard Analysis (JHA) based on the results of a Job Hazard Identification Tool (JHIT) walkdown as required in MAN-071-IWCP, Chapter 3. Place the completed JHA in Appendix 1.
- 8.1.3 Dispose of all waste in accordance with 1-P73-HSP-18.10 that includes requirements established by 3-PRO-141-RSP-09.01 "Unrestricted Release of Property, Material, Equipment and Waste", 3-PRO-088-RSP-09.02 "Radioactive Material Transfer and Shipment", and 3-PRO-140-RSP-09.03 "Unrestricted Release of Bulk or Volume Material". Comply with 1-PRO-079-WGI-001 "Waste Generation Instructions", as required and insert authorized instructions in Appendix 3 (titled: Miscellaneous & Field Generated Paperwork).
- 8.1.4 All records generated by this project will become part of the project history file as well as the Administrative Record as applicable.
- 8.1.5 Beware of wasps, nests, snakes and other wildlife that **may** be in the area. If wildlife cannot be avoided, THEN, contact and request site Ecology to investigate and authorize the continuation of the trailer radiological surveys as required. Call Ecology at x3764, Pager (303) 212-3167, Field Radio Individual #3787, and / or Field Radio Channel EMAD 12.
- 8.1.6 Check-off blocks (☐) are used for steps that do not require a signature. A check (✓) or initial signifies completion.
- 8.1.7 Read the required reading materials prior to initiating work, and sign off the required reading checklist.

NOTE

IF A STEP OR TECHNICAL STATEMENT IS DECLARED NOT APPLICABLE (N/A) BY THE DESIGNATED CONTRACTOR FIELD SUPERVISOR AND / OR SITE ENVIRONMENTAL ENGINEERING REP, MARK "N/A" IN THE SIGNATURE SPACE OR CHECK-OFF BLOCK, WITH INITIALS, EMPLOYEE NUMBER, AND DATE OF ENTRY. RECORD THE REASON FOR THE N/A IN STATUS LOG IN APPENDIX 2.

8.2 PRELIMINARY ACTIONS

NOTE

ACTIONS CAN BE PERFORMED OUT OF SEQUENCE EXCEPT AS SPECIFICALLY NOTED.

8.2.1 FIELD SUPERVISOR

Verify that all personnel are trained and qualified to perform tasks as specified in Work Sequence Instructions. Review for Ladder training and Fall Protection training as specified for this work package.



8.2.2 FIELD SUPERVISOR

Place and log all current and applicable material MSDSs in Appendix 3. Advise all workers where MSDSs are located for access as required. (N/A if not required).



Section 8 Initial Conditions and Prerequisites

8.2.3 FIELD SUPERVISOR

Initiate POD Evolutionary Request Forms for tasks contained in the *Characterization Package* contained in Appendix 8, and submit to the Plan of the Week representative.



8.3 SITE PREPARATION

NOTE

ACTIONS CAN BE PERFORMED OUT OF SEQUENCE EXCEPT AS SPECIFICALLY NOTED.

8.3.1 FIELD SUPERVISOR

Arrange work site setup of instruments, tools and materials. Review the JHA contained in Appendix 1 and comply with safety issues and potential hazard controls as required for site preparation.



8.3.2 FIELD SUPERVISOR

Inspect / verify previously established measurement locations identified by gridding on floors, walls and ceilings and roofs. In units where gridding is not practical, view labels or similar methods used. Signoff as a preliminary for work start.

FIELD SUPERVISOR

N.S. DEMOS

Name

Signature

Date

3-27-00

8.4 APPROVALS AND NOTIFICATIONS

8.4.1 FIELD SUPERVISOR

Notify the following organizations a minimum of 24 hours prior to their services being required:

- (1) Radiological Operations
- (2) Industrial Health and Safety
- (3) Radiological Engineering

**NOTE**

PRE-EVOLUTION BRIEFINGS MAY BE CONDUCTED AS A PRELIMINARY TO ALL BUILDING SURVEY SAMPLING ANALYSIS PROCESSES INDIVIDUALLY OR COLLECTIVELY. CHANGES IN PERSONNEL AND TASK INSTRUCTIONS REQUIRES NEW PRE-EVOLUTION BRIEFINGS PRIOR TO WORK START.

8.4.2 FIELD SUPERVISOR

Conduct pre-evolution briefings and Job Task Review (Safe Work Checklist) per MAN-066-COOP and RMRS OPS-DIR-016. Document pre-evolutionary briefing forms contained in Appendix 4. Briefings shall include all workers (applicable personnel) and be performed prior to the start of any / all work tasks to include site preparation activities.

FIELD SUPERVISOR

N.S. DEMOS

Name

Signature

Date

3-27-00

Section 9 Specific Task Instructions

9.1 PERMISSION TO START WORK

9.1.1 RESPONSIBLE MANAGER

All Initial Conditions, Prerequisites and Site Preparations are complete and permission is given to start work on radiological sampling and surveys, asbestos inspection and sampling, and fluorescent light ballast inspection.

RESP MANAGER

N.S. Demos

Name

Signature

Date

1-3-27-00

WARNING

WORK AREAS ARE SUBJECT TO HAVING NESTS OF STINGING INSECTS, HIGH ENTRANCE ACCESSSES AND POTENTIAL EXPOSURE TO LOOSE EQUIPMENT AND MATERIALS. THE JHA CONTAINED IN APPENDIX 1 PROVIDES SPECIFIC HAZARDS AND REQUIRED CONTROLS. ENSURE COMPLIANCE WITH THE JHA.

NOTE

THE CHARACTERIZATION PACKAGE WITH SPECIFIC SURVEY INSTRUCTIONS CONTAINED IN APPENDIX 8 IS THE PRIMARY PROCEDURAL AND METHODOLOGY REFERENCE FOR RADIOLOGICAL SURVEYS AND SAMPLING AS REFERENCED IN THIS IWCP STANDARD WORK PACKAGE. CONDUCT OF WORK WILL BE IN ACCORDANCE WITH THE APPENDIX 8 CHARACTERIZATION INSTRUCTIONS. SECTION 9 WILL CONTAIN CHECKOFFS FOR THE COMPLETION OF EACH CHARACTERIZATION SURVEY.

NOTE

ACTIONS CAN BE PERFORMED OUT OF SEQUENCE EXCEPT AS SPECIFICALLY NOTED.

9.2 TASKS

9.2.1 RCT

Conduct radiological surveys and analysis processes in accordance with Characterization Package task instructions contained in Appendix 8.



9.2.2 CDPHE-certified asbestos inspector

Conduct asbestos inspection and sampling in accordance with Characterization Package task instructions contained in Appendix 8.

☒ N/A 9/2/00

9.2.3 Site electrician or field personnel

Inspect all fluorescent light fixtures for PCB-containing ballasts in accordance with Characterization Package task instructions contained in Appendix 8.

☐ N/A

9.2.4 Sampling technician

Conduct radiological sampling utilizing tin snips, chisel, cordless drill, or other appropriate tool in accordance with Characterization Package task instructions contained in Appendix 8.



9.3 TASK COMPLETION

9.3.1 FIELD SUPERVISOR / RAD ENGINEER

All work tasks as indicated in Section 9 are completed satisfactorily in accordance with the Characterization Package and specified site procedures.

FIELD SUPERVISOR

N.S. Demos

Name

Signature

Date

4-5-00

RAD ENGINEER

ERIC D. MCKAMBY

Name

Signature

Date

4-10-00

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Section 10

Post Maintenance Testing Instructions

PURPOSE: This section is for work package closure only. All survey, sampling and analysis process requirements were satisfied in Section 9.

10.1 **PRECAUTIONS AND LIMITATIONS**

10.1.1 NONE

10.2 **PREREQUISITES**

10.2.1 NONE

10.3 **POST SURVEY, SAMPLING TESTING**

10.3.1 NONE

10.4 **SYSTEM / AREA RESTORATION & WORK PACKAGE COMPLETION**

10.4.1 **RCT / RAD ENG / RAD OPS**

Complete post job contamination surveys per Radiological Safety Practices for area, equipment and tools for release. Post or decontaminate areas as applicable. (N/A if not applicable).



10.4.2 **FIELD SUPERVISOR**

Perform the following:

Ensure that all permits, forms, checklist, logs and reports are complete and returned to the appropriate organization or department.



Ensure all work areas are cleaned at least to the level of cleanliness prior to work start.



APPENDIX 3.2 – JOB HAZARD IDENTIFICATION TOOL (JHIT)

WCF No.:	Title/Description: RECONNAISSANCE LEVEL CHARACTERIZATION, REV. 1										Date: 03/14/00			
Specific Work Location:		Yes	No	P	T	M	H&S	ENG	RAD	Qual	CRIT	NS	ENV	FP
		SAFETY SME INVOLVEMENT												
1	Is any electrical, mechanical, hydraulic, or chemical energy, either stored or active, available to energize the item being repaired or serviced, and will workers be placed at risk of contacting hazardous energy sources?		X	X	X		C R ¹							
2	Will work be done on an energized electric circuit?		X	X	X		C							
3	Does the task involve work in a confined space or an area that is a suspected confined space?		X	X	X		R							R
4	Is the work activity likely to result in an inhalation or dermal exposure to dust, mists, vapors, gases, or fumes that may require the use of a respirator or protective clothing?		X		X	X	R							
5	Does the activity require the use of chemicals, or are chemicals present in the work area or to be brought into the area?		X		X		C							
If "NO", then proceed to question #6.														
5a	Will the worker's eyes or skin potentially be exposed to toxic or corrosive chemicals?		X		X		C							
5b	Will the activity result in the generation of waste chemicals?		X		X		C							R
6	Is the area posted as a high noise area or will the work activities result in an uncharacterized noise exposure?		X		X	X	C R ²							
7	Could workers be exposed to environments that may be immediately dangerous to life and health or chemicals for which air purifying respiratory protection is inadequate (e.g., methylene chloride, nitric acid, carbon monoxide, carbon dioxide, or other oxygen deficient atmospheres)?		X		X		R							
8	Will asbestos containing material (ACM) or possible asbestos containing material (PACM) be disturbed?	X		X	X	X	R			R				R
9	Will worker be exposed to falling objects (e.g., construction area)?	X					C							
10	Are compressed gas cylinders or systems to be used?		X		X		C							R
11	Are pressure vessels, systems and relief devices included in the work scope, or is there exposure to pressurized vessels other than gas cylinders in the vicinity of the work area that are not protected by compliant pressure devices?		X		X		C	C						
12	Is work to include movement of material, tools, or equipment?		X											
If "NO", then proceed to question #13.														
12a	Is hoisting and rigging equipment to be used?		X	X	X	X	C	C		R				
12b	Is a powered industrial truck (forklift) to be used?		X	X	X	X	C	C		R				
12c	Will rollers (multi-tons), lift tables, jacks, or other material movement accessories be used?		X				C	C						

P = Checklist or Permit Required / T = Training Required / M = Medical Monitoring

R = Required SME Involvement & Work Document Concurrence / R¹ = Required for High Planning Level Activities / R² = Required for Uncharacterized Noise Exposure /

R³ = Required when welding is performed to verify conformance in accordance with the Site Quality Assurance Program. /R4= As required by activity and determined by planning team

C = SME Contacted & Involved in JHA Development w/o mandatory work document concurrence. C¹ = Preliminary review/screen by discipline required.

APPENDIX 3.2 – JOB HAZARD IDENTIFICATION TOOL (JHIT)

WCF No.:		Title/Description: RECONNAISSANCE LEVEL CHARACTERIZATION, REV. 1										Date: 3/14/00		
Specific Work Location:		Yes	No	P	T	M	H&S	ENG	RAD	Qual	CRIT	NS	ENV	FP
13	Is spark, flame, or heat producing work, to include welding, cutting and/or brazing to occur outside a NS/FP pre-approved designated welding area? If "NO", then proceed to question #14.		X	X	X		C	C		R ³				C
13a	If welding, cutting or brazing is to be performed, is the material to be worked on contaminated with either fixed or removable radioactive material, or does the work surface or area have a radiological history?		X	X	X		C		R					
13b	Is spark, flame, or heat producing work, to include welding, cutting, and/or brazing, to occur in a nuclear facility, other than in a NS/FP pre-approved designated welding area (e.g., machine shop)?		X	X			C		C			C		C
14	Is beryllium to be handled, are surfaces in the work area beryllium contaminated or suspected to be beryllium contaminated, will workers enter a beryllium operations area or a limited access beryllium operations area, or is there a potential beryllium inhalation exposure during the work activities?		X	X	X	X	R			C			C	
15	Is work to be performed on domestic (potable) water lines?		X							R				
16	Are lead or lead containing products being cut, scraped, sanded or melted?		X		X	X	R						R	
17	Is work to be performed on batteries?		X		X		C							
18	Are explosives to be handled?		X		X		R						R	C
19	Does the activity involve maintenance of a ventilation system or ducting where a fume hood or glove box was vented and the potential for an explosion may exist due to residual perchlorates?		X		X		R						R	C
20	Will an established and marked exit or egress route be blocked while work is being performed?		X	X			C							R
21	Will the activity involve elevated work? If "NO", then proceed to question #22.	X												
21a	Will ladders be used for this work?	X			X		C							
21b	Is scaffolding required?		X	X	X		C							
21c	Is fall protection required?	X		X	X		C							
21d	Is an aerial work platform to be used?	X		X	X	X	C							
21e	Is the work being performed on a roof?	X			X		C							
22	Are pinching hazards and/or sharp edges present?	X					C							
23	Are ergonomic hazards present? (i.e., does the activity involve a combination of the following: working in awkward postures, repetitive motion, and/or the use of force to complete the task?)	X					R							
24	Do temperature extremes exist?		X				R		C ¹					

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As/c

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APPENDIX 3.2 - JOB HAZARD IDENTIFICATION TOOL (JHIT)

WCF No.:		Title/Description: RECONNAISSANCE LEVEL CHARACTERIZATION, REV. 1										Date: 3/14/00		
Specific Work Location:		Yes	No	P	T	M	H&S	ENG	RAD	Qual.	CRIT	NS	ENV	FP
25	Will the activity involve any penetrations into or through, walls, ceilings, floors, slabs, or pads or demolition of any of these? COUPON SAMPLING If "NO", then proceed to question #26.	X					C	R	R	R		R		
25a	Is the material being penetrated in a radiologically posted area or will the penetration protrude into a radiologically controlled area?		X	X	X				R				C	
25b	Is there record, evidence or suspicion that the material being penetrated could have come in contact with radioactive material?	X		X	X				R					
25c	Has the surface of the material being penetrated been treated in any way such that absorbed contamination could be hidden (e.g., painted, scabbled, or other decon efforts)?		X	X	X				R					
25d	Will the activity involve any penetrations into a Material Access Area?		X						R			C		
25e	Will the activity involve penetrating or cutting a hole through the tertiary confinement of a nuclear building?		X									R		
26	Does this activity involve a Configuration Change as defined by DES-210?		X					R	R	R	C	C		
27	Does the activity involve movement, interaction or removal of fissile material?		X		X		C		R	R	R	C		
28	Are flammable/explosive gases involved in or required for the work in a nuclear facility, other than in an approved area (e.g., maintenance shop)?		X				C		R	R		C		R
29	Is the work activity occurring within a building, structure, or area that currently has or previously had radioactive material? If "NO", then proceed to question #30.		X											
29a	Is the work being conducted in a posted Radiation Area (RA), High Radiation Area (HRA) or Very High Radiation Area (VHRA)?		X	X	X				R					
29b	Is the work conducted in a posted Contamination Area (CA)?		X	X	X				C ¹					
29c	Is the work being conducted in a posted High Contamination Area (HCA)?		X	X	X				R					
29d	Is the work conducted in a posted airborne contamination area?		X	X	X				R				C	
29e	Has the area ever been designated as a radiological area?		X	X	X				C ¹				C	
29f	Does the area's history indicate a past presence of radioactive materials or operations?		X	X	X				R					
29g	Is there a potential for the activity to release radioactive material to the air through mechanical, chemical or other means?		X	X					R				R	
29h	Does the area contain, or is it bounded by any radiological postings, barriers, signs or labels?		X	X	X				R					
29i	Will the activity involve the transfer, pumping, or draining of radioactive or radioactively contaminated liquids?		X	X					R		C		C	
29j	Does the work activity involve equipment containing a sealed radioactive source or on equipment capable of generating radiation?		X	X	X				R					

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APPENDIX 3.2 – JOB HAZARD IDENTIFICATION TOOL (JHIT)

WCF No.:		Title/Description: RECONNAISSANCE LEVEL CHARACTERIZATION, REV. 1										Date: 3/14/00		
Specific Work Location:		Yes	No	P	T	M	H&S	ENG	RAD	Qual	CRIT	NS	ENV	FP
29k	Does the work involve penetration into systems, or surfaces containing or suspected of containing radioactive materials or contamination?	X		X	X				R					
29l	Does the work involve removal or addition of shielding?		X						R					
29m	Does the activity involve removal of equipment, ducts, piping, gloveboxes, plenums or tanks from a radioactive area?		X	X	X		C		R		R	C	R	
30	Does the activity involve the use of "NEW" processes, equipment or tools used in the work process? If "NO", then proceed to question #31.		X											
30a	Will this new tool, process or equipment be used for radioactive materials?		X	X	X			R	R		R	C		
30b	Has the user of this new tool, process, or equipment been trained on its use?		X		X			R						
31	Will this activity be conducted outside of a building? If "NO", then proceed to question #32.	X												
31a	Is the work being conducted in a soil contamination area?		X						R				C	
31b	Will the work involve excavation in an area adjacent to an under-building contamination area?		X						R				C	
31c	Does the activity involve soil probing or well installation?		X						R				C	
31d	Will this activity involve excavations, trenching, drilling, geoprobe sampling or any other disturbances of ground (soil, pavement, etc.) to occur?		X	X	X	X	R	R	R	R			R	
31e	Will the activity disturb an Individual Hazardous Substance Site (IHSS) and result in potential worker exposure to hazardous substances?		X		X	X	R		C				R	
32	Is there a potential for pyrophoric material to be handled, processed, or encountered during the work activity?		X						R					R
33	Will there be a new air emission or a change in the quantity of an existing air emission to the atmosphere (including radionuclide NESHAP)?		X	X									R	
34	Is this work activity being conducted in accordance with a Decommissioning Operations Plan (DOP), a Proposed Action Memorandum (PAM), an Interim Measures/Interim Remedial Action (IM/IRA) document, consent orders, Federal Facility Compliance Agreements (FFCA), or other CERCLA decision document under the Rocky Flats Cleanup Agreement (RFCA)?	X					R						R	
35	Will this activity install, modify, move, or impact an Underground Storage Tank or Aboveground Storage Tank?		X		X		R		C ¹				R	
36	Will this activity modify a current RCRA-regulated hazardous waste unit, relocate all or part of a unit, or otherwise impact a unit?		X		X		R						R	
37	Does the activity include closure of a RCRA hazardous waste unit or placing it in a RCRA stable condition?		X		X		R						R	
38	Will this activity generate waste? If "NO", then proceed to question #39.		X											

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APPENDIX 3.2 – JOB HAZARD IDENTIFICATION TOOL (JHIT)

WCF No.:		Title/Description: RECONNAISSANCE LEVEL CHARACTERIZATION, REV. 1										Date: 3/14/00		
Specific Work Location:		SME INVOLVEMENT												
		Yes	No	P	T	M	H&S	ENG	RAD	Qual.	CRIT	NS	ENV	FP
38a	Will this activity generate PCB ballasts or other TSCA governed waste types, including PCB bulk product or bulk waste?		X		X		C						C	
38b	Will this activity generate a liquid sanitary waste (non-radioactive, non-hazardous aqueous waste)?		X		X		C						R	
38c	Will this activity generate solid sanitary waste, which falls into the category of "special sanitary wastes"?		X		X		C						R	
38d	Will this activity generate solid sanitary waste (excluding prohibited items)?		X		X		C		C ¹				R	
38e	Will this activity generate hazardous, radioactive, or mixed waste?		X		X		C		R				R	
39	Is the work being conducted in an area covered by a Criticality Accident Alarm System (CAAS) that has been determined to not meet Life Safety / Disaster Warning (LS/DW) system audibility criteria or that has not been tested for LS/DW audibility and CAAS beacons are not visible from or within the affected area?		X				C				C	R		
40	Does this activity impact other facilities outside of the facility where the work is being performed (i.e.: work on the LS/DW radio feed affects other buildings required to broadcast music)?		X				R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴
41	Does the work activity involve generation, transfer or storage of any plutonium metals, solutions, residues, or salts that are within the scope of HSP 31.11		X				C		C			R		C
42	Do any Standing Orders, Operations Orders, or company/facility specific directives/instructions containing additional health and safety requirements apply to the work activity?		X				R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴
43	Does this activity involve any other hazards not previously identified or could this activity introduce any new hazards? (SHARP EDGES ON METAL SHEETING ON TRAILERS)	X					R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴	R ⁴

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JOB HAZARD ANALYSIS (Low & Medium Planning)

WCF No.:	Title/Description: RECONNAISSANCE LEVEL CHARACTERIZATION, REV. 1		Date: 03/14/00
Company/Organization: RMRS	Location:		Department: CHARACTERIZATION
SEQUENCE OF BASIC JOB STEPS		POTENTIAL HAZARD (FROM WALKDOWN & JHIT)	REQUIRED CONTROLS
Radiological Surveys:			
1. Use ladder, scaffolding, or aerial lift to access areas above 2 meters. (Most areas are below 2 meters)		Falls	Training: Ladder Safety Awareness or Fall Protection, plus Aerial Lift Training if using aerial lift; OS&IH PM Ch. 39 compliance
2. Carry out smears, scans, and surveys.		Spread of radiological contamination Falling objects (i.e., radiological instrument)	Training: Radworker 2 or RCT training; RWP, if required Head protection when work is occurring overhead.
Asbestos inspection and sampling:			
1. Visually inspect suspect asbestos-containing material.		None.	None.
2. RCT: Carry out pre-sampling survey.		Spread of radiological contamination	Training: Radworker 2 or RCT training; RWP, if required
3. Collect sample as described in PRO-563-ACPR, "Asbestos Characterization Procedure," utilizing Wondermaker, hole saw, chisel, snips, etc		Asbestos exposure.	Training: Asbestos Awareness; IH&S determination of additional measures
4. RCT: Carry out post-sampling survey.		Spread of radiological contamination	Training: Radworker 2 or RCT training; RWP, if required
5. RCT: Carry out release survey on samples/ sample containers		Spread of radiological contamination	Training: Radworker 2 or RCT training; RWP, if required
Team Leader (Name / Signature / Date) Paul Wojtaszek		Planner (Name / Signature / Date) Paul Wojtaszek	IH&S (Name / Signature / Date) Brian Maria
Engineer (Name / Signature / Date) N/A	RadCon (Name / Signature / Date) Rick Roberts <i>E. D. Roberts for 3/15/00</i>	Quality Control (Name / Signature / Date) Steve Luker	Quality Control (Name / Signature / Date) <i>Steve Luker 3/14/00</i>
Criticality Engineer (Name / Signature / Date) N/A	Nuclear Safety (Name / Signature / Date) N/A	Environmental (Name / Signature / Date) Marcia Murdock	Environmental (Name / Signature / Date) <i>Marcia Murdock 03/14/00</i>
Fire Protection (Name / Signature / Date) N/A	Lead Craft / Operator (Name / Signature / Date)	Other (Name / Signature / Date)	

Signature indicates concurrence and approval of the Job Hazard Identification Tool and the Job Hazard Analysis for those programs identified in the JHIT as necessary for planning

APPENDIX 3.4 – JOB HAZARD ANALYSIS (Low & Medium Planning)
Continuation Sheet

WCF/Procedure No.:	Title/Description: RECONNAISSANCE LEVEL CHARACTERIZATION, REV. 1		Date: 3/14/00
Company/Organization	Location:		Page ____ of ____
SEQUENCE OF BASIC JOB STEPS Inspection of light fixtures for PCB ballasts 1. Use ladder as necessary 2. Open fixture and visually inspect ballast "Coupon" sampling for isotopic analysis 1. Use coring drill, sheet metal snips, chisel, or appropriate tool to cut out sample.		POTENTIAL HAZARD (FROM WALKDOWN & JHII) Falls Falling objects Penetration of energized circuit, rebar, other unexpected contact Penetration too deep Sharp edges	REQUIRED CONTROLS Training: Ladder Safety Awareness or Fall Protection; OS&IH PM Ch. 39 compliance Head and eye protection. Training: Electrical Safety, as required; Pre-job visual inspection of other side of floor or roof from below; GFCI; grounding; rubber gloves, cordless drill Use of drill stop or other mechanical measure Leather gloves

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